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 TI Model dendrons and dendrimers incorporating diphenylamino-substituted diphenylpolyene and PPV-oligomer moieties for NLO applications  
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 SO Proceedings of SPIE-The International Society for Optical Engineering (1999), 3736 (Organic Nonlinear Optical Materials), 170-177  
 CODEN: PSTSDG; ISSN: 0277-786X  
 PH SPIE-The International Society for Optical Engineering  
 DT Journal  
 LA English  
 CC 35-8 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 36, 73  
 AB The synthesis and characterization are described of diphenylamino-substituted diphenylpolyene and poly(p-phenylenevinylene)s as two-photon absorbers, photoluminescent materials suitable for org. light-emitting diodes, and as dendrimers capable of 3D charge delocalization and exceptionally large third order hyperpolarizability. Bis-(diphenylamino)diphenylpolyenes form exceptionally stable, highly absorbing bipolaronic dications in soln. and thin film. Replacement of one diphenylamino substituent with a N-(hydroxyethyl), N-ethylaminophenyl moiety yields a polyene that also forms stable bipolarons which are intensely fluorescent. These chromophores are easily attached to either a PMMA backbone or to 3,5-dihydroxybenzyl alc. to yield functionalized dendrons capable of attachment to various core mols. Diphenylamino-substituted PPV oligomers can also be obtained with similar functionality. These materials possess large two-photon cross-sections and display optical limiting for nanosecond pulses with peak activity extending into the visible portion of the spectrum.  
 ST dendron diphenylamino diphenylpolyene prepn nonlinear optical property; polyphenylenevinylene diphenylamino substituent photon absorber; optical limiting dendrimer diphenylamino diphenylpolyene  
 IT Poly(arylenealkenylenes)  
 RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation) (dendritic; prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)  
 IT Chemical chains  
 (hyperbranched; prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)  
 IT Bipolaron  
 Fluorescence  
 Luminescence, electroluminescence  
 Nonlinear optical materials  
 Optical hyperpolarizability  
 Optical limiting  
 (prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)  
 IT Dendritic polymers  
 RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation) (prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)  
 IT 281635-29-6P  
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(convergent dendron; prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

IT 281655-31-0P

RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation) (dendrimer; prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

IT 134061-63-5P

RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation) (prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

IT 281655-28-5P, 4-Diphenylamino-4'-(N-ethyl-N-(2-hydroxyethyl)stilbene

RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

IT 55038-42-2, 4-(Diphenylamino)-4'-[4-(diphenylamino)styryl]stilbene

RL: PRP (Properties)

(prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

IT 80-05-7, reactions 29654-55-5, 3,5-Dihydroxybenzyl alcohol

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

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